

## CONSERVING THE LAND

### INTERACTING WITH THE ENVIRONMENT

**H**aving access to locations and places that 99 percent of the world will never be able to see is what Ken Householder says is the best part of his job as an agricultural engineer with the USDA's Natural Resource Conservation Service (NRCS) in Tulelake, Calif.

One of those areas, he says, is a huge oasis with spring water and lots of wild life in the middle of a 1,200-acre private ranch.

"I have a key to the gate of some of the most amazing natural sites," remarks Householder.

Householder prepares standards and specifications for conservation practices for the governmental agency, with a special emphasis on irrigation and range management. He is involved with conservation planning both for individual and private landowners, as well as ranchers.

Once a landowner contacts Householder, he sets up an interview with him or her to talk about the hopes, desires, and dreams for the piece of ground. He also finds out what kind of operation the land is to be used for, whether it is for crops or ranging. Householder then takes a tour of the property, taking pictures and making notes of the condition of the vegetation, soil, water, air, plants, animals, and human interaction. He also uses global positioning systems data to document things such as overgrazing and erosion.

"I try to get the whole picture and identify what is going on with that property," says Householder.

He then comes up with a conservation plan using the technology gathered along with his ag engineering skills. Once the plan is completed, it is signed by the landowner, the local conservation agency, and the NRCS.

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Having a passion for the environment wasn't initially in Householder's plan when he entered college at the University of Minnesota. Wanting to be a pilot, he decided to study aerospace engineering. That all changed, he says, when he took a Native American philosophy class.

"I began to think about human interaction with the world in general. I came to the conclusion that agriculture was the most profound interaction with the planet ... and the most screwed up," he says.

After taking that class, he decided to change his major to agricultural engineering with an environmental emphasis.

He also had the opportunity to work with ASABE member Dr. Gary Sands, an ag extension engineer in the ag engineering department at the University.

"That was an invaluable experience," says Householder. "It gave me the opportunity to see what the work is like and what an ag engineer actually does."

Householder estimates that he has been involved in the conservation practices of 45,000 acres of land since employed by the NRCS in 2002.

The newest technology that he uses in his work is geographical information systems. It presents the land in easy-to-understand, graphical, color pictures.

"The farmers and ranchers are most impressed with this new technology. The engineering information is mumbo jumbo to them, but they are impressed with color maps of their farm," laughs Householder.

And what does Householder see for future land use?

"The urbanization and destruction of prime agricultural land in the United States is the largest challenge we will face in the future," says Householder. "Really, really good prime land is going

into housing, pavement, roofs, patios, and pools. It's the least valuable from an environmental perspective. Agricultural and ranch land is the best land with good environmental processes coming out of that land," he says emphatically. "What's the impact of that going to be 20 years down the road? We'll be spending a lot more money on food than we are now, which is not going to help our standard of living.

"Helping the private landowners practice good conservation is the greatest thing for me," Householder states. "The foundation starts with agriculture. Without agriculture, there couldn't be anything else. We have to eat first!"



Ken Householder is an ag engineer for the NRCS. Part of his work involves touring private lands in order to gather information for developing a conservation plan for landowners and ranchers.